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Mazdoor Kisan Shakti Sangathan

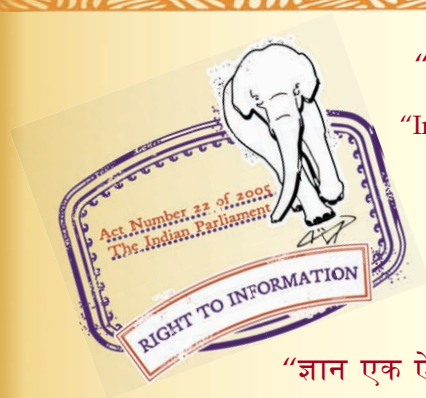
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IS 595 (1954): Blown Rape (or Mustard) Oil for use in Lubricants [FAD 13: Oils and Oilseeds]



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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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BLOWN RAPE (OR MUSTARD) OIL FOR
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Indian Standard

SPECIFICATION FOR BLOWN RAPE (OR MUSTARD) OIL FOR USE IN LUBRICANTS

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SPECIFICATION FOR BLOWN RAPE (OR MUSTARD) OIL FOR USE IN LUBRICANTS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 13 September 1954, on the joint endorsement by the Chemical Division Council and the Engineering Division Council of the draft finalized on 23 April 1954, by the Lubricants Sectional Committee.

0.2 It is well known that the addition of vegetable oils to mineral lubricating oils improves the oiliness, increases the viscosity index and reduces coefficient of friction. Rape (or mustard) oils after blowing are generally added to straight mineral oils for better performance in the machinery in which such oils are used as lubricants.

0.3 Taking into consideration the views of the producers, consumers and technologists, the Sectional Committee responsible for the preparation of this standard felt that it should be related to the existing trade practices in the country in this field. This consideration led the Committee to base this standard on: (i) the experimental data collected at the University Chemical Laboratories, Lahore, during 1936-41 while executing the scheme of Messrs Steel Bros, London; and (ii) data available with the Harcourt Butler Technological Institute, Kanpur; and with various oil companies.

0.4 'Indian Standard Methods of Test for Petroleum and its Products' [IS: 1448 (Part I)-1960 and IS: 1448 (Part III)-1963] and 'Indian Standard Methods of Sampling and Test for Oils and Fats (*Revised*)' (IS: 548-1964) are necessary adjuncts to this specification.

0.4.1 Wherever a reference to any standard mentioned under 0.4 appears in this specification, it shall be taken as a reference to the latest version of the standard.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with *IS: 2-1949 Rules for Rounding Off Numerical Values; the number of places retained in the rounded off value should be the same as that of the specified value in this standard.

*Since revised.

0.6 This standard is intended chiefly to cover the technical provisions relating to the supply of the material, and it does not include all the necessary provisions of a contract.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of test for blown rape (or mustard) oil, intended for compounding with various straight mineral lubricating oils.

2. SAMPLING

2.1 Representative samples of the material shall be drawn as prescribed in IS : 1447-1966 'Methods of Sampling of Petroleum and its Products'.

3. REQUIREMENTS

3.1 Description—The material shall be prepared from genuine and good quality rape (or mustard) oil. It shall be clear, homogeneous and free from any suspended matter, water, dirt and other visible impurities.

3.2 The material shall comply with the requirements given in Table I.

TABLE I REQUIREMENTS FOR BLOWN RAPE (OR MUSTARD) OIL

Sl. No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO		
			(P:) of IS: 1448 (Part I)-1960	(P:) of IS: 1448 (Part III)-1963	Cl No. of IS: 548-1964
(1)	(2)	(3)	(4)	(5)	(6)
i)	Colour, not deeper than	6.5	*P: 12	—	—
ii)	Specific gravity at 15.5°/15.5°C, <i>Max</i>	0.962	P: 32	—	—
iii)	Viscosity at 60°C, in centistokes	124 to 220	P: 25	—	—
iv)	Flash point (Pensky Martens, closed), °C, <i>Min</i>	270	*P: 21	—	—
v)	Ash, percent by weight, <i>Max</i>	0.1	*P: 4	—	—
vi)	Acidity (neutralization value), <i>Max</i>	10	*P: 2	—	—
vii)	Saponification value	190 to 220	—	P: 55	—
viii)	Unsataponifiable matter, percent by weight, <i>Max</i>	2.0	—	P: 55	—
ix)	Iodine value (Wijs)	70 to 80	—	—	13

*Since revised.

4. TESTS

4.1 Tests shall be carried out according to the methods prescribed in 'Methods of Test for Petroleum and its Products' [IS: 1448 (Part I)-1960 and IS: 1448 (Part III)-1963], and 'Methods of Sampling and Test for Oils and Fats (Revised)' (IS: 548-1964). References to relevant test methods and clause number are given in col 4, 5 and 6 of Table I.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Conversion
Force	newton	N	1 N = 1 kg·1 m/s ²
Energy	joule	J	1 J = 1 N·m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V·s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

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